Community Information Group Meeting Summary
Motorola 52nd St. Superfund Site
January 25, 2012, 6:20 to 8:40 pm
Bioscience High School, Phoenix, AZ

Project Team and Regulator Attendees:

United States Environmental Protection Agency (EPA): Janet Rosati, Leana Rosetti, Gerry Hiatt, Martin Zeleznik, Clancy Tenley, Dana Barton

EPA Contractor: Shaw Environmental, Inc. (Shaw): Sue Kraemer, Doug Hulmes

Arizona Department of Environmental Quality (ADEQ): Harry Hendler, Brian Stonebrink, Joellen Meitl, Wendy Flood, Felicia Calderon, Travis Barnum, Wayne Miller, Nicole Coronado, Tina LaPage

ADEQ Contractor: William Neese, URS Corporation

Technical Assistance Grant (TAG) Technical Advisor: Richard Rushforth

Moderator: Marty Rozelle

CIG Members:
Mary Moore, TAG recipient, Lindon Park Neighborhood Assn.
Martha Breitenbach, Resident
Doug Tucker, Resident
Les Holland, Resident
Ruth Ann Marston, Resident and School Board President
Wendoly Abrego
Rene Chase-Dufault, Lindon Park Neighborhood Assn. President

Additional attendees:
Adrianna Holmes
Arjun Venkatesan
B. Paul Barnes
Barbara Murphy, Clear Creek, Freescale Consultant
Braden Kay, ASU
Cassandra Cruz, BioScience High School
Dennis Buran
Diane Lopez, Resident
Diane Mitchell, Arcadia
Dorothy Trippel, ASU
Jenn McCall, Freescale
Jan Jakubowski,
Kenneth Hays, Resident
Manfred Pleischke, Conestoga Rivers & Associates
Natalie Chrisman, AMEC
Nehal Jolly
Richard Avellone
Rob Mongrain, Arcadis
Rolf Halden, PhD, PE
Ruby Ramirez, BioScience High School
Ryan Nebeker, BioScience High School
Sarah T. Wilkinson, PhD

Shoshana Krueger, BioScience High School
Steve Brittle, Don't Waste Arizona
Tasha Lewis
Theresa Sanchez,
Tom Suriano, Clear Creek, Freescale consultant
Troy Kennedy, Honeywell
Approximately 20 Bioscience High School students

The following acronyms may be used throughout this document:

ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
CIG	Community Information Group
CoC	Contaminant of Concern
DCE	Dichloroethylene
EPA	Environmental Protection Agency
HHRA	Human Health Risk Assessment
RI/FS	Remedial Investigation/Feasibility Study
OU	Operable Unit
PCE	Tetrachloroethylene
TCE	Trichloroethylene
ug/l	Microgram/liter
VC	Vinyl Chloride
VOC	Volatile Organic Compound

A Community Information Group (CIG) meeting was held at Bioscience High School located at 512 E. Pierce Street in Phoenix, Arizona from approximately 6:20 pm to 8:40 pm on January 25, 2012. The primary purpose of the meeting was to update the public on the current status and remedial progress at the Motorola 52nd St. Superfund Site and answer questions leftover from previous meetings. Emphasis was placed on the 5-Year Review Report for the Motorola 52nd Street Superfund Site. The meeting also provided a forum for interaction between stakeholders, regulators and the public.

This meeting summary and the Powerpoint presentations made at this CIG meeting are posted on the two project websites:

www.epa.gov/region09/motorola52ndst
http://www.azdeq.gov/environ/waste/sps/phxsites.html#mot52a

6:20 pm: Ms. Rozelle began the meeting. She indicated there was a packed agenda and asked for introductions from the CIG members and regulators only. Dr. Marston asked that EPA send a formal thank you letter to Bioscience High School for allowing use of the school for the meeting.

6:25 pm: Ms. Rozelle stated that the CIG, ADEQ and EPA recently had held a meeting to identify ways the three entities could work together to share information with the public, and developed ground rules for the CIG meetings. She summarized the ground rules, emphasizing being respectful, brief, specific, and focusing on facts and the topic on hand. She stated that questions should be asked at the end of each presentation, not during presentations, unless a clarification was needed. She also asked for suggestions for other meeting places, indicating it would be good to move the locations from time to time.

Ms. Rosetti announced that there were comment cards available for the audience to take notes and submit if that was their preference. Ms. Rozelle introduced Wendy Flood of ADEQ and William Neese of URS.

Five – Year Review Presentation - William Neese URS Corporation; ADEQ Contractor (6:30 pm)

Mr. Neese's main points:

- Five-Year Review is a snapshot of remedial progress that has been made at the site and focused on the interim remedies at OU1-OU2. It is an evaluation of the protectiveness of the remedy.
- Protectiveness statement could not be made for OU1 and OU2 due to Vapor Intrusion issues.
- Vapor Intrusion in OU1 is currently being investigated and will be covered in the next next Five-Year Review.
- OU2 Vapor Intrusion will be addressed next and will look at methodology and results of OU1 program.
- Presented the progress of accomplishments of goals from the previous Five-Year Review
- Private well (the Morgan Well) will continue to be sampled on a regular basis.
- Boron concentrations in effluent for the OU2 Treatment System were handled utilizing mixing zones in the canal.
- Presented the issues and recommendations for OU1 and OU2.
- Discussed the carryover issues and invited audience to write down specific questions and regulator would address.
- Presented fluctuations in costs per pound of VOC removal for treatment systems.
- Changes in the toxicity assessment of TCE will be addressed when and if new toxicity values are released.

Ms. Breitenbach asked for clarification of who URS is and their role, Mr. Neese clarified URS is an engineering consulting firm that was hired by ADEQ to complete the Five-Year Review.

A citizen asked for clarification regarding protectiveness. Ms. Rosetti explained that protectiveness pertains to whether human health is protected, and that people are not being exposed to harmful environmental contaminants. Because the exposure pathway for Vapor Intrusion has not been ruled out, a protectiveness statement can't be made.

A citizen asked if water from the Morgan well is being used; Mr. Neese responded water from the well is used for irrigation by a private citizen. Female citizen asked where the well was located. Mr. Neese provided an approximate location with help from others. Citizen asked if the well was used to fill public swimming pools; Mr. Neese indicated no and continued with his presentation.

Ms. Breitenbach asked for clarification on the mixing zone. Mr. Neese and Ms. Rosetti explained boron is diluted in the mixing zone and sampled at the end of the mixing zone to ensure it meets the required levels. A citizen stated that no water is extracted for use in the mixing zone. Mr. Neese confirmed that was correct.

Ms. Rozelle asked a list of questions about the 5 year review that were derived from the TAG meeting.

- Ms. Flood described scenarios in which questions are "not applicable" to certain residents during the resident interview process.
- Ms. Flood also answered another question regarding privacy, and explained that residents' home addresses and phone numbers were included in the interview, but only with permission from the resident.
- Mr. Stonebrink explained why the OU1 and OU2 five-year reviews were combined; he indicated EPA requested this and they have found the issues are similar in the two OUs and combining the reports was more efficient.

Ms. Marston asked about interim solutions: are they less effective due to declining water levels from pumping and drought conditions? Mr. Neese clarified that he did not mean to imply that the interim solutions are less effective, but eventually declining water levels could make the interim solutions less effective as the capture zones could become smaller. Ms. Marston asked when a final solution would be derived. Mr. Neese and Ms. Flood explain that the Five-Year Review is intended to keep the project moving forward toward a final solution, but it is not possible to give a date for this goal.

Ms. Moore asked about two specific appendices in the Five-Year Review, which address the groundwater capture zones. Mr. Neese indicated that essentially the treatment systems were effective and obtaining capture, and explained the inherent uncertainties with groundwater flow. Specifically, he discussed the southern portion of OU-2 and that portions of the plume upgradient of the current capture area may eventually migrate to an area outside the current capture zone. The report recommendation includes development of a workplan to determine how to effectively deal with this portion of the plume.

Ms. Moore asked specifically about the southernmost extraction well. Mr. Neese explained this well has been more effective pumping at a slower rate, allowing water to recharge the well. Ms. Marston offers an analogy how the extraction effectiveness for well EW-S could be similar to a straw and a milkshake: if one maintains a slow and steady intake, the milkshake will continue to go into the straw until almost dry, not necessarily so if you extract too fast in multiple places. Mr. Neese indicated he could conduct a little more research and further explain the effectiveness of capture in this area.

Mr. Holland stated that the previous Five-Year Review indicated that soil treatment in the acid treatment area was required and the current Five-Year Review indicated that this was not performed. Mr. Neese and Ms. Flood indicated that other areas of concern were more important to address based on the data and were prioritized. Mr. Holland stated that ADEQ and EPA were OK with no soil remediation being conducted in acid treatment over the last five years. Ms. Flood indicated that was correct.

Ms. Breitenbach asked what is being done to address DNAPL in bedrock. Mr. Neese and Ms. Flood explained that some DNAPL is being extracted from bedrock on a pilot scale to gain a better understanding of the bedrock hydrology, to properly evaluate the options for removing DNAPL in OU1. Ms. Breitenbach asked about OU2, Mr. Neese Mr. Stonebrink explained that DNAPL has not been detected in OU2.

Ms. Rozelle indicated that there was only five minutes left for questions. The group agreed to have a question and answer period after Mr. Rushforth's presentation on the 5 year review.

Female citizen asked when the Vapor Intrusion issue was first discovered. Ms. Flood indicated the Five-Year Review identified the Vapor Intrusion issue in 2006. Ms. Flood indicated she could review previous Five-Year Reports to more specifically identify when Vapor Intrusion was first addressed. Ms. Rozelle indicated there is a meeting with regards to Vapor Intrusion in February and a fact sheet about Vapor Intrusion is also available. Mr. Brittle, a community member, indicated Vapor Intrusion was first addressed in 1992.

Review of the Five Year Review Report – Richard Rushforth, TAG Technical Advisor (7:32 pm)

Mr. Rushforth's main points:

- A public comment period should be scheduled into the next five-year review process.
- There was a 10-fold increase in agency oversight costs in the last five years.
- When will a work plan that addresses clean-up criteria at the acid treatment plant be published?
- The areas where Vapor Intrusion will be assessed within OU-2 should be clarified.
- A study should be completed to assess the possibility of reinjection of OU1 effluent.
- Further assessment of upgradient sources in OU-1 needs to be completed.
- What are the effects of the rising water table in OU-2?
- OU-3 should be included in the five-year review process
- Suggested subsets for OU-1 and OU-2 within the five-year reviews, to aid readability.
- Provide more information documenting the conditions of homes sampled for Vapor Intrusion in OU1.
- Better handling of private information of community members.

7:45 pm: Mr. Rushforth finished presentation; CIG members expressed their appreciation. Mr. Rushforth indicated the TAG will submit questions presented in memo format to ADEQ.

Ms. Rozelle asked if the audience had any questions.

Mr. Brittle asked if a DNAPL study has ever been conducted prior to the Bedrock Pilot Study. Ms. Flood indicated the recent study was the first she was aware of.

A citizen asked when can protectiveness be established for Vapor Intrusion, and what would the final remedy be.

Ms. Rosati explained the current status of Vapor Intrusion and dynamics of the project. She explained that a final remedy can be formulated, several issues need to be addressed: the Vapor Intrusion study needs to be completed;

they need to finish assessing the acid treatment plant area, to make sure it is not contributing to groundwater contamination; and they need to assess feasibility of extraction of DNAPL from bedrock. She explained the possibility of hydraulic containment, if DNAPL cannot be effectively removed from bedrock. She indicated that the remedy will most likely be continuing to pump and treat groundwater, as it is now.

Same citizen asked if a degree of protectiveness has been issued. Ms. Rosati said no, and that Vapor Intrusion data will need to be fully assessed before protectiveness can be issued. She further indicated that protectiveness will be addressed in the next Five-Year Review. He asked if the EPA will produce a report regarding Vapor Intrusion to the press or other outlet. Ms. Rosati explained that Freescale is required to produce report once the investigation is completed that will contain this information.

Female citizen asked if the methodology of sampling will be included in the report and expressed her concern over multiple variables in air sampling. Ms. Rosati explained that sampling methodology will be included in the reports. She explained the multiple lines of evidence are used to evaluate the data; and that sub-slab results are the primary driver for decisions regarding mitigation systems.

7:57 pm: Ms. Rozelle moderates and indicated Vapor Intrusion will be discussed in the February meeting, and directed the group back to the Five-Year Report.

Ms. Breitenbach asked why the Vapor Intrusion investigation wasn't included in the Five-Year Review. Mr. Neese explained that the Five-Year Review Report addresses the in-place remedy, and there is no in-place remedy for Vapor Intrusion. Ms. Breitenbach asked why only TCE is reported in mass removal calculations. Mr. Neese explained the calculations output is in terms of pounds of TCE removed, but represents all VOCs removed (i.e., a total mass removed is given by converting other contaminants to the same scale as mass of TCE and added together).

Student asked if re-injecting effluent would help remedy the issue of declining water levels. Mr. Neese explained that re-injecting water would potentially be evaluated as an alternative end use, but probably would not create a situation in which more contaminated water could be extracted, as the reinjected water would be in another area.

Ms. Rozelle announced the next agenda item:

Past Business and Status Update - Wendy Flood – ADEQ Project Manager

Ms. Flood began by indicating she would be providing answers to questions posed in the November meeting.

- Explained the parameters evaluated when determining timing of carbon change outs. Mr. Holland asked if the specific parameters could be made available to the CIG. Ms. Flood indicated she could provide them to the group.

- Addressing the capture of the southern area of OU-2; she indicated that area was discussed tonight and addressed in the Five-Year Review.

- Extraction of DNAPL from bedrock; Ms. Flood stated that ADEQ shares the concern of the group and it is addressed in the Five-Year Review.

- Exploring new remedial technologies; Ms. Flood encouraged the CIG to add this subject on future agendas.

- Request to have the same formatting in the OU1 and OU2 reports. Legal documents dictate what should be included in the reports pertaining to OU1 and OU-2 and they are done by different contractors. She asked for more specifics from the CIG regarding formatting and content of the reports and she could then see if the requests could be made.

- 3D model; Ms. Flood indicated that ADEQ could not access the model because they do not have software license rights. Mr. Tucker stated that he recalled that the consultant that completed the 3D model was going

to provide a CD. Ms. Flood indicated that the CD will not help if they do not have the software to run it. Ms. Moore asked if a list of the software and licenses needed could be produced.

There were other questions asked by Ms. Breitenbach in the previous meeting; Ms. Flood did not address these because Ms. Breitenbach was absent from the room; she indicated she would address the specific questions one on one with Ms. Breitenbach.

8:07 pm: Ms. Rosetti announced the meeting on February 15th which will address the Vapor Intrusion study at OU-1. Ms. Marston asked if the meeting would be of great interest to people downgradient or only people in OU-1. Ms. Rosetti responded "the February 15th meeting is primarily for people in OU-1, but others are encouraged to attend if they are interested."

Mr. Tucker asked about OU-2 residents attending; Ms. Rosetti reiterated if someone is curious, to absolutely attend, but they will not be discussing OU-2 at the meeting.

Female citizen asked about the WQARF boundary to the northeast and whether that area was being studied; Ms. Rosetti explained the step-out procedures to define the extent of affected media.

Female citizen asked how the community was notified. Ms. Rosetti stated EPA mailed a notice to everyone in the area.

8:12 pm: Ms. Flood provided an update on Kachina/Joray. She stated ADEQ sent a letter to Kachina/Joray indicating they have until January 30th to provide a proposed schedule of activities to address contamination at the facility.
Mr. Tucker asked for a summary of Kachina/Joray. Mr. Hendler provided a summary: Kachina/Joray no longer exists, ADEQ is working with the insurance carrier; and the insurance carrier has hired a consultant to do soil vapor extraction.

Ms. Flood provided an update to the end use of OU1 effluent. The interim solution is currently to construct a pipeline to transfer the effluent to the cross-cut canal. This work would have to be carried out regardless of the final decision. Ms. Flood indicated it is not the final solution, and that additional evaluation of end-use options is still underway. Ms. Moore asked for the approval letter. Ms. Flood indicated she could send copies of the letter to the CIG members.

8:16 pm: Mr. Rozelle moderated, indicating the meeting was at the 8:15 mark and would spend five minutes for calls to the public. She indicated she was going to skip the summary of CIG survey results, although the survey was very helpful and informative.

Mr. Brittle stated he called the Region 9 Environmental Justice Department to complain about the current meeting being held outside OU-1 and the plume boundaries. He objected to having the meeting outside of OU-1, and stated it wasn't convenient to people in OU-1. Ms. Abrego indicated they did get input from CIG members regarding location and it was a communal decision to hold the meeting at Bioscience High School. It was also pointed out that this location was within the plume, within OU-3. Ms. Rosetti stated that she was open to other meeting suggestion locations, but that Gateway had a parking issue and the rooms aren't large enough. Ms. Rozelle indicated this was discussed earlier in the meeting, and asked attendees to write down any suggestions or comments due to time constraints.

Female citizen asked if they know where the plumes are now. Ms. Flood discussed the latest map which showed the Motorola 52nd Street Site boundaries, and indicated the latest maps are available on ADEQ and EPA websites. Ms. Rosetti indicated there is a small summary box on the fact sheets, which describes the OU study areas.

Ms. Moore asked how current the data was on the map. Ms. Flood explained the timeline of receiving the data and getting them on the maps. She indicated the data on the maps will typically be one or two years after the data were collected. Ms. Rosetti indicated the groundwater concentration data does not change much over that time period.

A citizen asked whether an address in the study area, but not within the plume boundaries, was considered to be on the Superfund Site. Mr. Neese explained the logistics of plume boundary maps and the study area, indicating that generally the study area shown on the maps are bigger than the actual impacted area, to be conservative. Ms. Rosetti clarified that an address outside of the actual plume boundary, shown is a pink area on the map, is not on the Superfund Site.

Ms. Rozelle asked the audience to submit written suggestions for the agenda for the next CIG meeting. Ms. Rosetti offered several suggestions for agenda items.

Mr. Brittle indicated EPA will likely drop the groundwater standard for TCE from 5 to 1, and would be interested in seeing what the new plume boundary would look like. Ms. Rosetti indicated she will check into that.

Male citizen asked about air permits and the mechanism for controlling contaminants being released to the atmosphere. Ms. Rosati explained how Maricopa County regulates air releases, and that vapor is treated to safe levels at the treatment facilities before release to atmosphere, primarily through the use of carbon filters.

Female citizen voiced her concern about unsafe levels getting into the atmosphere, and wanted more air monitoring. Ms. Rosetti and Ms. Rozelle suggested this be discussed in the next CIG meeting in April.

Mr. Brittle indicated he wanted evidence on how it was determined that contamination downgradient of 7th Avenue was not from Motorola, and wanted EPA to look into what was going on in the West Van Buren WQARF. Ms. Rosetti stated this question was posed in the last meeting and Ms. Rozelle was trying to get the group to pin down more specific questions regarding this issue. She indicated the CIG would try to get with the technical advisor to formulate these specific questions. Mr. Brittle stated there has to be some documentation somewhere regarding delineation of OU3 and the West Van Buren WQARF, and he is interested in how that decision was made.

Ms. Rozelle indicated the next meeting will consist primarily of addressing the questions from the TAG advisor's presentation and others that came up during the meeting; and they should nail down a list of questions in about a month and prioritize them.
9:37 pm Meeting adjourned.